CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 85-110
NPDES NO. CA0038679

ISSUING WASTE DISCHARGE REQUIREMENTS FOR:

LIVERMORE-AMADOR VALLEY WATER MANAGEMENT AGENCY
DECHLORINATION FACILITY
SAN LEANDRO, ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

1. The Livermore-Amador Valley Water Management Agency (LAVWMA), hereinafter called the discharger, by application dated March 21, 1985, has applied for issuance of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES).

2. The discharger proposes to seasonally discharge up to 1.28 mgd of secondary treated, chlorinated, and dechlorinated wastewater for a maximum duration of two consecutive days during extreme wet weather to San Lorenzo Creek. The discharge from the proposed dechlorination facility will be a surface discharge at a point located westerly of Lewelling Boulevard where the Southern Pacific Railroad bridge crosses San Lorenzo Creek, at Latitude 37° 40" 30' and Longitude 122° 9" 14'. San Lorenzo Creek is a lined flood control channel within the tidal prism at the discharge point and flows to Central San Francisco Bay. The discharge is planned to become operational in October 1987.

3. Under present contractual agreements, the discharger (LAVWMA) currently discharges treated wastewater (19.72 mgd contractual maximum) into the East Bay Dischargers Authority's (EBDA) transport pipeline and deepwater outfall into Central San Francisco Bay. Recent LAVWMA studies showed that an additional 1.28 mgd could be exported via its existing pipeline and pump station with minor modifications, but that any additional expansion would necessitate major construction of new facilities which are not part of this Order. In June 1985, EBDA and LAVWMA modified their contractual agreements to allow LAVWMA to export its proposed additional 1.28 mgd of flow through the EBDA system except during periods when EBDA required full capacity in its pipeline for its own use. LAVWMA estimates that EBDA will require full pipeline capacity once every four to five years for a maximum two day period during wet weather. During this period, LAVWMA proposes to discharge its 1.28 mgd of additional flows to San Lorenzo Creek.

4. LAVWMA's current discharge through the EBDA system is presently regulated by the Board's Order No. 84-30 (NPDES No. CA0037869). The two LAVWMA tributary agencies, the Dublin San Ramon Services District and the City of Livermore Water Reclamation Plan, are currently regulated by separate waste discharge requirements contained in Orders Nos. 84-31 (NPDES No. CA0037613) and 84-32 (NPDES No. CA0038008), respectively.

5. LAVWMA became effective on March 26, 1979, as a joint powers agency created for wastewater management planning for the service areas of Livermore, Pleasanton, and the Dublin San Ramon Services District (DSRSD). By contractual agreement, DSRSD is responsible for operating and maintaining LAVWMA's export pipeline and pump station facilities. Specific plans for reliable operation and maintenance of the proposed dechlorination facility have not yet been finalized.

6. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on July 21, 1982. The Basin Plan contains water quality objectives for Central San Francisco Bay, San Lorenzo Creek, and contiguous waters.

7. The beneficial uses of Central San Francisco Bay, San Lorenzo Creek, and contiguous water bodies are:

Water Contact Recreation
Non-Contact Water Recreation
Wildlife Habitat
Preservation of Rare and Endangered Species
Estuarine, Warm Fresh Water and Cold Fresh Water Habitats
Fish Migration and Spawning
Industrial Service and Process Supply
Shellfish Harvesting
Municipal and Domestic Supply
Navigation
Commercial and Sport Fishing

8. Effluent limitation and toxic effluent standards, established pursuant to Section 301, 304, and 307 of the Clean Water Act and amendments thereto are applicable to the discharge.

9. Effluent limitations of this Order are based on the Basin Plan, State Plans and policies, current plant performance, and best engineering judgment.

10. The Basin Plan as amended in 1982 contains a prohibition of discharge of any wastewater which has particular characteristics of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1 or into any non-tidal water, dead-end slough, similar confined waters, or immediate tributaries thereof. The Basin Plan also allows exceptions to this discharge prohibition if the discharger satisfactorily demonstrates that an alternate discharge means (which provides an equivalent level of environmental protection) would impose an inordinate burden on the discharger relative to beneficial uses protected, or the discharge is part of a reclamation project, or net environmental benefits would be derived from the discharge.

A Board consideration for allowing the discharge an exception to the prohibition of discharge to confined waters is based on the following findings:

a. A habitat study performed by the discharger has shown that the discharge as proposed will meet the beneficial use concerns of the California Department of Fish and Game and Regional Board.

b. The discharge as proposed will be intermittent (once every four to five years during wet weather only).

c. The discharger's system and its tributary wastewater treatment plants provide reliable and adequate secondary treatment of wastewaters.

d. There is an apparent net environmental benefit as a result of allowing Castlewood Country Club's connection to the City of Pleasanton's sewer system for treatment and disposal by DSRSD, thereby eliminating Castlewood's discharges to the Livermore-Amador Valley groundwaters.

Therefore, the discharge as permitted by this Order is granted a waiver from the Basin Plan's discharge prohibition to confined waters based primarily on the net environmental benefits exception and on reliability of treatment described above.

11. LAVWMA has certified a final environmental impact report in accordance with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.). The project as approved by LAVWMA will not have a significant effect on water quality.

12. The discharger and interested agencies and persons have been notified of the Board's intent to reissue waste discharge requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.

IT IS HEREBY ORDERED, that the Livermore-Amador Valley Water Management Agency, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act, as amedned and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Bypass or overflow of untreated or partially treated wastewater to waters of the State either at the dechlorination facility or from any of the joint facilities or the discharger's export system and pump stations during wet weather (October 15 through April 15) is prohibited.

2. Discharge at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited.

3. Discharge during dry weather (April 16 to October 14) is prohibited.

4. The average daily wet weather flow shall not exceed 1.28 mgd and shall be limited to periods when EBDA requires its full capacity.

B. Effluent Limitations

1. Effluent discharged shall not exceed the following limits:

Constituents	Units	Monthly Average	Weekly Average	Maximum Daily	Instantaneous Maximum
a. Settleable Solids	ml/l-hr	0.1	---	---	0.2
b. BOD	mg/l	30	45	---	---
c. Total Suspended Solids	mg/l	30	45	---	---
d. Oil & Grease	mg/l	10	---	20	---
e. Total Chlorine Residual [1]	mg/l	---	---	---	0.0

NOTES:
[1] Requirement defined as below the limit of detection in standard methods.

2. The pH of the discharge shall not exceed 9.0 nor be less than 6.0.

3. The survival of test organisms acceptable to the Executive Officer in 96-hour bioassays of the effluent shall achieve a 90 percentile value of not less than 50% survival based on the three most recent consecutive samples. Samples may be dechlorinated in the laboratory prior to testing.

4. Representative samples of the effluent shall not exceed the following limits [1]:

Constituent	Unit of Measurement	6 Month Median	Daily Maximum
a. Arsenic	mg/l	0.01	0.02
b. Cadmium	mg/l	0.02	0.03
c. Total Chromium	mg/l	0.005	0.01
d. Copper	mg/l	0.2	0.3
e. Lead	mg/l	0.1	0.2
f. Mercury	mg/l	0.001	0.002
g. Nickel	mg/l	0.1	0.2
h. Silver	mg/l	0.02	0.04
i. Zinc	mg/l	0.3	0.5
j. Cyanide	mg/l	0.1	0.2
k. Phenolic Compounds	mg/l	0.5	1.0
l. Total Identifiable Chlorinated Compounds [2]	mg/l	0.002	0.004

Notes (for Effluent Limitation B.5.):

[1] These limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards.

[2] Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls (PCBs), and other identifiable chlorinated hydrocarbons.

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5. The running median value for the MPN of total coliform in any five (5) consecutive effluent samples shall not exceed 240 coliform organisms per 100 milliliters. Any single sample shall not exceed 10,000 MPN/100 ml.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quanitites which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

a. Dissolved oxygen	5.0 mg/l minimum. Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.

b.	Dissolved sulfide	0.1 mg/l maximum
c.	pH	Variation from natural ambient pH by more than 0.5 pH units.
d.	Un-ionized ammonia	0.025 mg/l as N Annual Median 0.4 mg/l as N Maximum

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. The discharger shall comply with all sections of this Order immediately upon adoption.

2. Where concentration limitations in mg/l are contained in this permit, the following mass emission limitations shall also apply:

   Mass Emission Limit in lbs/day = Concentration limit in mg/l x 8.34 x Actual Flow in mgd over the time interval for which the limit applies.

3. Neither the collection, treatment, storage, transmission, or discharge facilities shall create a nuisance as defined in the California Water Code.

4. The discharger shall comply with the following tasks and time schedule:

	Task	Report Due Date
a.	Status Report on Award of Construction Contract	November 1, 1985
b.	Status Report on Construction and Design of Dechlorination Facilities	30 days prior to start of construction
c.	Complete Construction	15 days after construction is completed
d.	Begin Operation	15 days after operation is begun

The discharger shall submit to the Executive Officer a report of the tasks noted above on or before the compliance due date for the report.

5. The discharger shall submit its initial Operations and Maintenance (O & M) Manual by October 15, 1987. The discharger shall review and update its O & M Manual annually, or in the event of significant facility or process changes, shortly after such changes have occurred. Annual revisions, or letters stating that no changes are needed, shall be submitted to the Regional Board by October 15 of each year. Documentation of operator input and review shall accompany each annual update.

6. The discharger shall develop and submit by October 15, 1987 a contingency plan as required by Board Resolution No. 74-10. The discharger shall review and update its contingency plan annually thereafter. Annual revisions, or letters stating that no changes are needed, shall be submitted to the Regional Board by October 15 of each year. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for the Board to consider such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

7. The discharger shall comply with the attached self-monitoring program as adopted by the Board and as may be amended by the Executive Officer.

8. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977 with the exception of Reporting Requirements B.2 and B.3. A report on safeguards to electric power failure as requried in Provision A.12 shall be submitted at least 90 days prior to the start of operation.

   Item C.2 of the Standard Provisions shall read as follows:

   "The monthly (30-day) or weekly (7-day) average discharge is the total discharge by weight during a 30, or 7, consecutive calendar day period, respectively, divided by the number of days in the period that the facility was discharging. Where less than daily sampling is required by this permit, the monthly, or weekly, average discharge shall be determined by the summation of all the measured discharges by weight divided by the number of days during the 30, or 7, consecutive calendar day period when the measurements were made. For other than monthly or weekly periods, compliance shall be based upon the average of all measurements made during the specified period."

9. This Order expires September 18, 1990. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

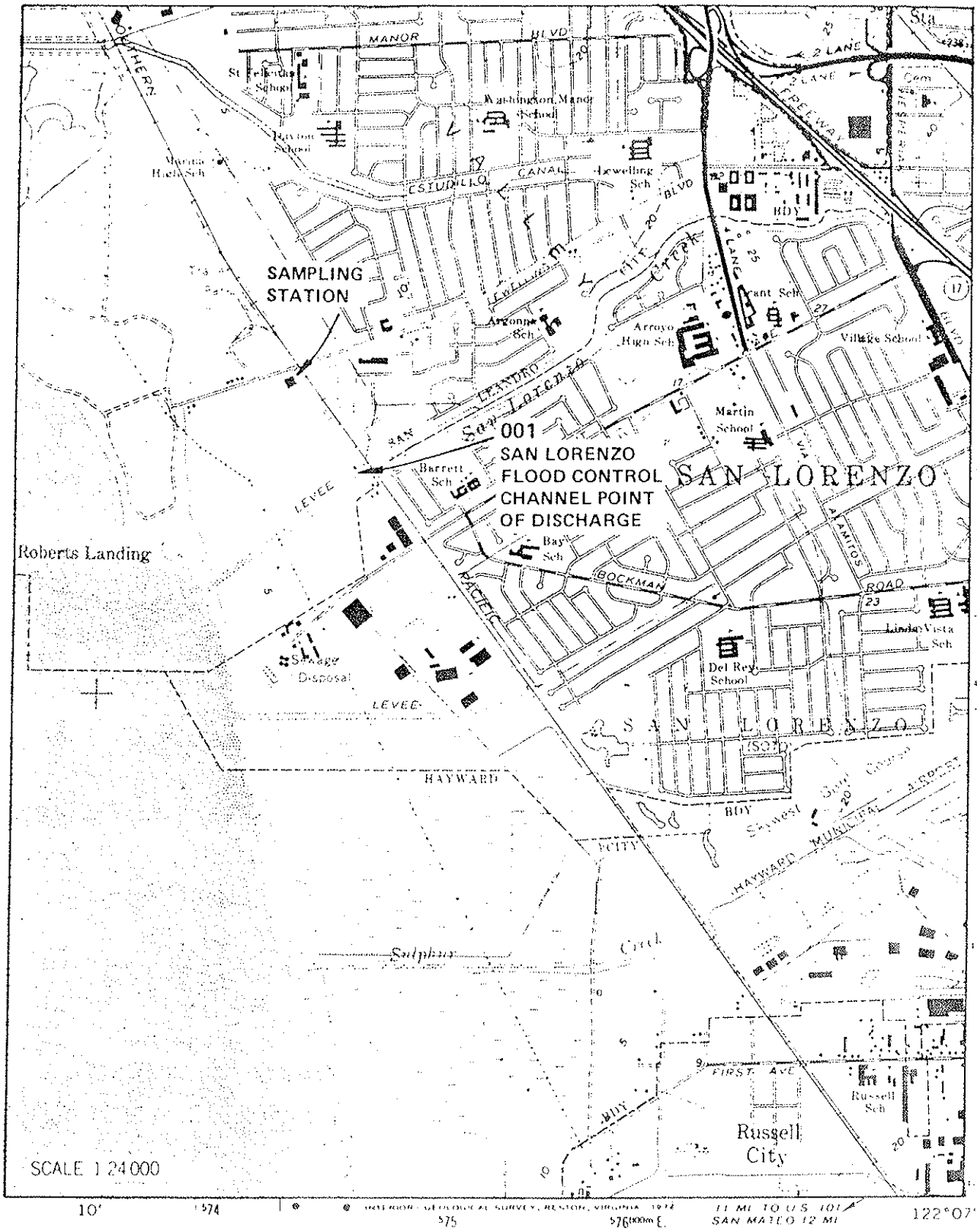
10. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

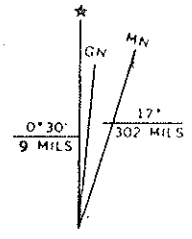
I, Roger B. James, Executive Director, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on September 18, 1985.

ROGER B. JAMES
Executive Officer

Attachments:

A - Proposed Dechlorination Facility
B - LAVWMA/EBDA System Flow Scheme
Standard Provisions & Reporting Requirements, April 1977
Self-Monitoring Program
Resolution No. 74-10





UTM GRID AND 1973 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

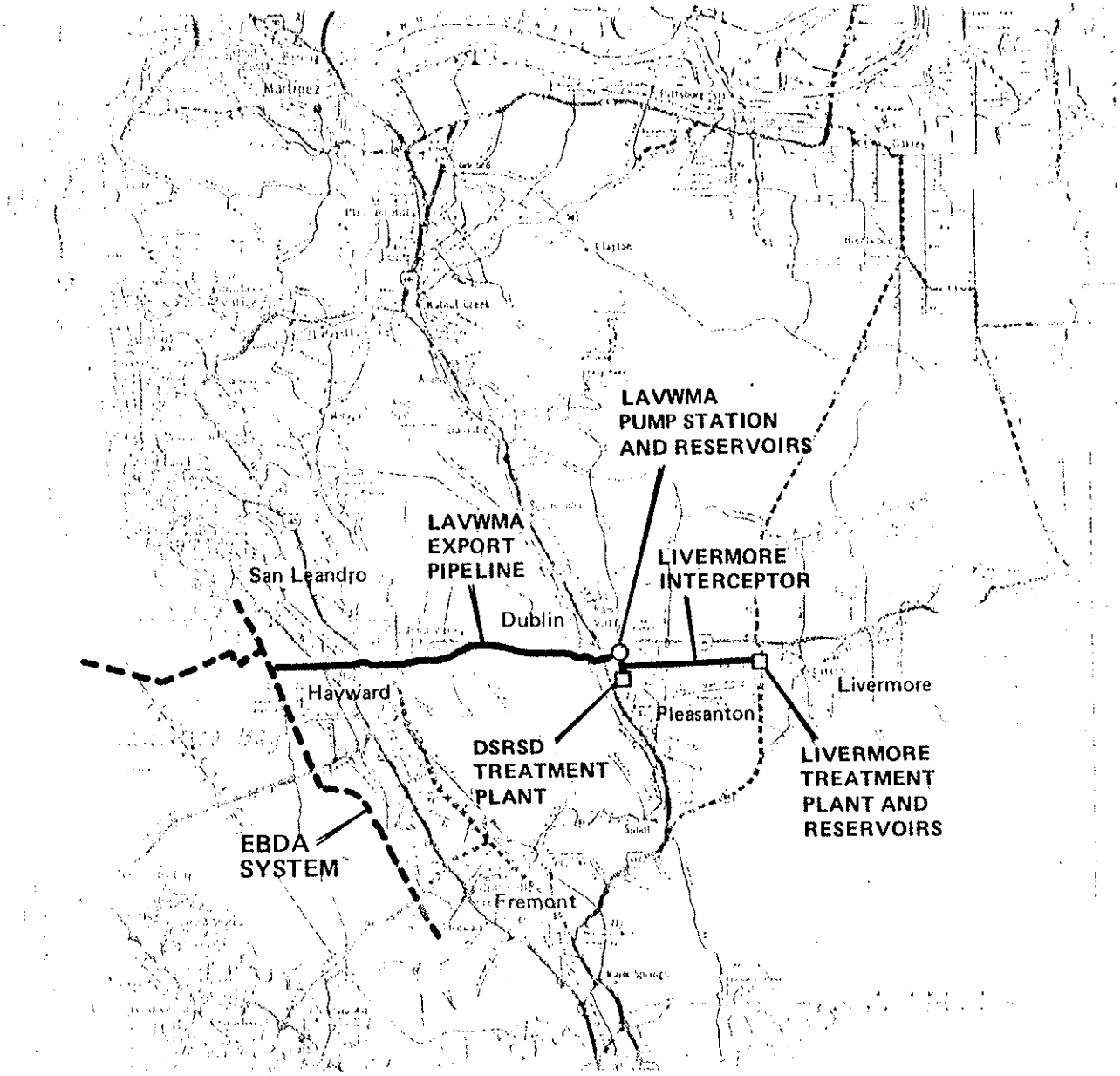
ATTACHMENT A Dechlorination Facility (001)

LOCATION MAP

From U.S. Geological Survey Map, 1959, San Leandro, California

LIVERMORE-AMADOR VALLEY WATER MANAGEMENT AGENCY

CH2M HILL



Attachment B

CURRENT LAVWMA SYSTEM TO EBDA SYSTEM

CH2M HILL

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

LIVERMORE-AMADOR VALLEY WATER MANAGEMENT AGENCY
DECHLORINATION FACILITY
SAN LEANDRO, ALAMEDA COUNTY

ORDER NO. 85-110

NPDES NO. CA0038679

CONSISTING OF

PART A, DATED JANUARY 1978

AND

PART B, September 18, 1985

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. EFFLUENT - DECHLORINATION FACILITY

Station	Description
E-001	At any point in the discharger's system facilities at which adequate disinfection has taken place and prior to the point of discharge.

B. RECEIVING WATERS (SAN LORENZO CREEK)

Station	Description
C-1	At a point located 100 feet upchannel from the discharge point.
C-2	At a point located 100 feet downchannel from the discharge point.
C-3	Reference station located 1/2 mile upchannel and/or out of the discharge's zone of influence.

C. LAND OBSERVATIONS - DECHLORINATION FACILITY

Station	Description
P-1 through P-'n'	Located at the corners and midpoints of the perimeter fenceline surrounding the dechlorination facility.

D. OVERFLOWS AND BYPASSES - DIVERSION SYSTEM FROM EBDA SYSTEM

Station	Description
O-1 through O-'n'	Bypass or overflows from pump stations or diversion pipelin/relief valve system from the EBDA system.

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling and analysis shall be that as given as Table I.

III. MODIFICATION OF PART A, DATED JANUARY 1978 (with amendments)

A. Delete Sections C.3., C.4., C.5.d., D.1., D.4., E.2.c., and F.1.

B. Change Section F.3. reporting frequency to the 15th of the month following each month of discharge.

C. Modify Section D.3.b. to read "Receiving water samples shall be collected at each station on each designated sampling day within one hour of lower slack water. Where sampling at this time is not practical, sampling shall be performed within one hour of higher slack water."

D. Modify Section F.4. to submittal of an annual report each year containing the information as required or a statement that no discharge occurred during the year.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 85-110.

2. Has been adopted by the Regional Board on September 18, 1985.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
Executive Officer

Attachments:
Table I

TABLE I

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	E-001			All C Sta.	All P Sta.	All O Sta.							
TYPE OF SAMPLE	C-X	G	Cont	G	O	O							
Flow Rate (mgd)	E												
BOD, 5-day, 20° C, or COD (mg/l & kg/day)	E												
Chlorine Residual & Dosage (mg/l & kg/day) (3)			E										
Settleable Matter (ml/1-hr. & cu. ft./day)		E											
Total Suspended Matter (mg/l & kg/day)	E												
Oil & Grease (mg/l & kg/day)		E											
Coliform (Total or Fecal) (MPN/100 ml) per req't (1)		E											
Fish Toxicity, 96-hr. TL_{50} % Survival in undiluted waste	E												
Ammonia Nitrogen (mg/l & kg/day) (2)	E												
Nitrate Nitrogen (mg/l & kg/day)													
Nitrite Nitrogen (mg/l & kg/day) (2)	E												
Total Organic Nitrogen (mg/l & kg/day)													
Total Phosphate (mg/l & kg/day)													
Turbidity (Jackson Turbidity Units)													
pH (units)		E		E									
Dissolved Oxygen (mg/l and % Saturation)		E		E									
Temperature (°C)		E		E									
Apparent Color (color units)													
Secchi Disc (inches)													
Sulfides (if DO < 5.0 mg/l) Dissolved (mg/l)		E		E									
Arsenic (mg/l & kg/day) (5)	C												
Cadmium (mg/l & kg/day) (5)	C												
Chromium, Total (mg/l & kg/day) (5)	C												
Copper (mg/l & kg/day) (5)	C												
Cyanide (mg/l & kg/day) (5)	C												
Silver (mg/l & kg/day (5)	C												
Lead (mg/l & kg/day) (5)	C												

TABLE I (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	E-001			All C Sta.	All P Sta.	All O Sta.							
TYPE OF SAMPLE	C-X	G	Cont	G	O	O							
Mercury (mg/l & kg/day) (5)	C												
Nickel (mg/l & kg/day) (5)	C												
Zinc (mg/l & kg/day) (5)	C												
PHENOLIC COMPOUNDS (mg/l & kg/day) (5)	C												
All Applicable Standard Observations		E		E	D	D							
Bottom Sediment Analyses and Observations													
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day) (5)	C												
Un-ionized Ammonia (mg/l) (2)		E		(4) E									
Dilution Ratio Estimate (4)		E											

LEGEND FOR TABLE

TYPES OF SAMPLES

- G = grab sample
- C-24 = composite sample - 24-hour
- C-X = composite sample - X hours (used when discharge does not continue for 24-hour period)
- Cont = continuous sampling
- DI = depth-integrated sample
- BS = bottom sediment sample
- O = observation

TYPES OF STATIONS

- I = intake and/or water supply stations
- A = treatment facility influent stations
- E = waste effluent stations
- C = receiving water stations
- P = treatment facilities perimeter stations
- L = basin and/or pond levee stations
- B = bottom sediment stations
- G = groundwater stations
- O = Overflow or bypass stations

FREQUENCY OF SAMPLING

- E = each day of discharge
- H = once each hour
- D = once each day of operation of dechlorination facility
- M = once each month
- Y = once each year
- C = once each period of continuous discharge
- 2/H = twice per hour
- 2/W = 2 days per week
- 5/W = 5 days per week
- 2/M = 2 days per month
- 2/Y = once in March and once in September
- Q = quarterly, once in March, June, Sept. and December
- 2H = every 2 hours
- 2D = every 2 days
- 2W = every 2 weeks
- 3M = every 3 months
- Cont = continuous

TABLE I NOTES

1. Sampling and compliance with the Total Coliform effluent limits may be demonstrated at each tributary treatment plant prior to its discharge to the LAVWMA system. A letter requesting the above modification in sampling requirements shall be submitted to the Executive Officer. Coliform data for the plant shall be submitted with the discharger's report for the appropriate sampling days.

2. Ammonia nitrogen, nitrite nitrogren, and un-ionized ammonia shall be tested for on the same composite samples used for the fish bioassay test.

3. Chlorine residual analyzers shall be calibrated against grab samples as frequently as necessary to maintian accurate control and reliable operation. If an effluent violation is detected, grab samples shall be taken every 30 minutes until compliance is achieved.

4. Minimum and maximum dilution ratios (effluent vs. channel flow) shall be calculated for each day of discharge. The concentration of un-ionized ammonia after dilution for receiving water stations (C-1 & C-2) may be calculated upon approval by the Executive Officer of a satisfactory methodology submitted by the discharger.

5. Sampling and compliance with the various metallic, phenolic, and TICH effluent limits may be demonstrated at each tributary treatment plant prior to its discharge to the LAVWMA system. Results shall be reported with the self-monitoring report.